

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 11:28:25 ON 30 MAR 2009

=> fil .bec

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.22

0.22

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 11:28:48 ON 30 MAR 2009
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11 FILES IN THE FILE LIST

=> s luciferase#

FILE 'MEDLINE'

L1 24261 LUCIFERASE#

FILE 'SCISEARCH'

L2 18569 LUCIFERASE#

FILE 'LIFESCI'

L3 9491 LUCIFERASE#

FILE 'BIOTECHDS'

L4 4316 LUCIFERASE#

FILE 'BIOSIS'

L5 23709 LUCIFERASE#

FILE 'EMBASE'

L6 17832 LUCIFERASE#

FILE 'HCAPLUS'

L7 25151 LUCIFERASE#

FILE 'NTIS'

L8 170 LUCIFERASE#

FILE 'ESBIOBASE'

L9 13130 LUCIFERASE#

FILE 'BIOTECHNO'

L10 8370 LUCIFERASE#

FILE 'WPIDS'

L11 4092 LUCIFERASE#

TOTAL FOR ALL FILES

L12 149091 LUCIFERASE#

=> s l12(10a)(rail road worm or rhagophthalmus or phrixothrix)

FILE 'MEDLINE'

581 RAIL

12944 ROAD

10788 WORM

0 RAIL ROAD WORM

(RAIL(W)ROAD(W)WORM)

4 RHAGOPHTHALMUS

11 PHRIXOTHRIX

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L13      10 L1 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'SCISEARCH'
      7490 RAIL
      25974 ROAD
      11361 WORM
          1 RAIL ROAD WORM
            (RAIL (W) ROAD (W) WORM)
          6 RHAGOPHTHALMUS
          16 PHRIXOTHRIX
L14      11 L2 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'LIFESCI'
      256 "RAIL"
      2910 "ROAD"
      4131 "WORM"
          0 RAIL ROAD WORM
            ("RAIL" (W) "ROAD" (W) "WORM")
          9 RHAGOPHTHALMUS
          9 PHRIXOTHRIX
L15      6 L3 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'BIOTECHDS'
      22 RAIL
      80 ROAD
      365 WORM
          0 RAIL ROAD WORM
            (RAIL (W) ROAD (W) WORM)
          4 RHAGOPHTHALMUS
          5 PHRIXOTHRIX
L16      8 L4 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'BIOSIS'
      1637 RAIL
      11945 ROAD
      20193 WORM
          0 RAIL ROAD WORM
            (RAIL (W) ROAD (W) WORM)
          21 RHAGOPHTHALMUS
          35 PHRIXOTHRIX
L17      11 L5 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'EMBASE'
      697 "RAIL"
      11567 "ROAD"
      12381 "WORM"
          0 RAIL ROAD WORM
            ("RAIL" (W) "ROAD" (W) "WORM")
          2 RHAGOPHTHALMUS
          7 PHRIXOTHRIX
L18      7 L6 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'HCAPLUS'
      12998 RAIL
      32050 ROAD
      15041 WORM
          0 RAIL ROAD WORM
            (RAIL (W) ROAD (W) WORM)
          10 RHAGOPHTHALMUS
          33 PHRIXOTHRIX
L19      28 L7 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

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FILE 'NTIS'
    8615 RAIL
    16781 ROAD
    534 WORM
        0 RAIL ROAD WORM
          (RAIL(W)ROAD(W)WORM)
        0 RHAGOPHTHALMUS
        0 PHRIXOTHRIX
L20      0 L8 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'ESBIOBASE'
    318 RAIL
    5449 ROAD
    4593 WORM
        0 RAIL ROAD WORM
          (RAIL(W)ROAD(W)WORM)
        4 RHAGOPHTHALMUS
        8 PHRIXOTHRIX
L21      8 L9 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'BIOTECHNO'
    46 RAIL
    589 ROAD
    2355 WORM
        0 RAIL ROAD WORM
          (RAIL(W)ROAD(W)WORM)
        0 RHAGOPHTHALMUS
        2 PHRIXOTHRIX
L22      2 L10 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

FILE 'WPIDS'
    200338 RAIL
    124387 ROAD
    29539 WORM
        0 RAIL ROAD WORM
          (RAIL(W)ROAD(W)WORM)
        4 RHAGOPHTHALMUS
        9 PHRIXOTHRIX
L23      10 L11 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

TOTAL FOR ALL FILES
L24      101 L12 (10A) (RAIL ROAD WORM OR RHAGOPHTHALMUS OR PHRIXOTHRIX)

=> s l24 not 2005-2009/py
FILE 'MEDLINE'
    2883238 2005-2009/PY
L25      7 L13 NOT 2005-2009/PY

FILE 'SCISEARCH'
    5398352 2005-2009/PY
          (20050000-20099999/PY)
L26      8 L14 NOT 2005-2009/PY

FILE 'LIFESCI'
    772125 2005-2009/PY
L27      4 L15 NOT 2005-2009/PY

FILE 'BIOTECHDS'
    97676 2005-2009/PY
L28      3 L16 NOT 2005-2009/PY

FILE 'BIOSIS'

```

2510304 2005-2009/PY
L29 8 L17 NOT 2005-2009/PY

FILE 'EMBASE'
2454941 2005-2009/PY
L30 4 L18 NOT 2005-2009/PY

FILE 'HCAPLUS'
5965453 2005-2009/PY
L31 14 L19 NOT 2005-2009/PY

FILE 'NTIS'
67998 2005-2009/PY
L32 0 L20 NOT 2005-2009/PY

FILE 'ESBIOBASE'
1450375 2005-2009/PY
L33 6 L21 NOT 2005-2009/PY

FILE 'BIOTECHNO'
0 2005-2009/PY
L34 2 L22 NOT 2005-2009/PY

FILE 'WPIDS'
5297965 2005-2009/PY
L35 1 L23 NOT 2005-2009/PY

TOTAL FOR ALL FILES
L36 57 L24 NOT 2005-2009/PY

=> dup rem l36
PROCESSING COMPLETED FOR L36
L37 25 DUP REM L36 (32 DUPLICATES REMOVED)

=> d tot

L37 ANSWER 1 OF 25 BIOTECHDS COPYRIGHT 2009 THOMSON REUTERS on STN
TI Novel polypeptide comprising Phrixothrix red luciferase
light emitting protein, useful for screening drug, and for detecting
transcriptional activity of gene in cell;
involving vector-mediated gene transfer and expression in host cell
AU OHMIYA Y; NAKAJIMA Y
AN 2005-01290 BIOTECHDS
PI WO 2004099421 18 Nov 2004

L37 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Use of osmolytes to heat-stabilize luciferase and/or apyrase
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
IN Nyren, Pal
AN 2004:355110 HCAPLUS
DN 140:371471

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|----------|
| PI | WO 2004035818 | A1 | 20040429 | WO 2003-SE1627 | 20031021 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | |

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, ML, MR, NE, SN, TD, TG
 AU 2003272174 A1 20040504 AU 2003-272174 20031021

- L37 ANSWER 3 OF 25 MEDLINE on STN DUPLICATE 1
 TI GroEL chaperone binding to beetle luciferases and the implications for refolding when co-expressed.
 SO Bioscience, biotechnology, and biochemistry, (2004 Oct) Vol. 68, No. 10, pp. 2096-103.
 Journal code: 9205717. ISSN: 0916-8451.
 AU Venkatesh Balan; Arifuzzaman Mohammad; Mori Hirotada; Taguchi Takahisa; Ohmiya Yoshihiro
 AN 2004530157 MEDLINE
- L37 ANSWER 4 OF 25 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN
 AN 2004299580 ESBIODBASE
 TI GroEL chaperone binding to beetle luciferases and the implications for refolding when co-expressed
 AU Venkatesh, Balan; Taguchi, Takahisa; Ohmiya, Yoshihiro; Arifuzzaman, Mohammad; Mori, Hirotada
 CS Venkatesh, Balan; Taguchi, Takahisa; Ohmiya, Yoshihiro (Cell Dynamics Research Group, Natl. Inst. Adv. Indust. Sci. T., Midorigaoka, Ikeda, Osaka 563-8577 (JP)); Arifuzzaman, Mohammad; Mori, Hirotada (Res. Educ. Ctr. for Genetic Info., Nara Inst. of Science and Technology, Ikoma 630-0101 (JP))
 EMAIL: venkatesh_balan@hotmail.com
 SO Bioscience, Biotechnology and Biochemistry (Oct 2004) Volume 68, Number 10, pp. 2096-2103, 26 refs.
 CODEN: BBBIEJ ISSN: 0916-8451
 DOI: 10.1271/bbb.68.2096
 CY Japan
 DT Journal; Article
 LA English
 SL English
 ED Entered STN: 2 Feb 2009
 Last updated on STN: 2 Feb 2009
- L37 ANSWER 5 OF 25 MEDLINE on STN DUPLICATE 2
 TI Improved expression of novel red- and green-emitting luciferases of Phrixothrix railroad worms in mammalian cells.
 SO Bioscience, biotechnology, and biochemistry, (2004 Apr) Vol. 68, No. 4, pp. 948-51.
 Journal code: 9205717. ISSN: 0916-8451.
 AU Nakajima Yoshihiro; Kimura Takuma; Suzuki Chie; Ohmiya Yoshihiro
 AN 2004219564 MEDLINE
- L37 ANSWER 6 OF 25 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN
 AN 2004242544 ESBIODBASE
 TI Improved expression of novel red- and green-emitting luciferases of Phrixothrix railroad worms in mammalian cells
 AU Nakajima, Yoshihiro; Kimura, Takuma; Suzuki, Chie; Ohmiya, Yoshihiro
 CS Nakajima, Yoshihiro; Kimura, Takuma; Suzuki, Chie; Ohmiya, Yoshihiro (Cell Dynamics Research Group, Res. Institute for Cell Engineering, Natl. Inst. Adv. Indust. Sci. T., 1-8-31 Midorigaoka, Ikeda, Osaka 563-8577 (JP)); Suzuki, Chie (TOYO B-Net Co., 27 Wadai, Tsukuba, Ibaraki 300-4247 (JP))
 EMAIL: y-nakajima@aist.go.jp
 SO Bioscience, Biotechnology and Biochemistry (Apr 2004) Volume 68, Number 4, pp. 948-951, 9 refs.

CODEN: BBBIEJ ISSN: 0916-8451

DOI: 10.1271/bbb.68.948

CY Japan

DT Journal; Article

LA English

SL English

ED Entered STN: 2 Feb 2009

Last updated on STN: 2 Feb 2009

- L37 ANSWER 7 OF 25 MEDLINE on STN DUPLICATE 3
TI Bidirectional role of orphan nuclear receptor RORalpha in clock gene
transcriptions demonstrated by a novel reporter assay system.
SO FEBS letters, (2004 May 7) Vol. 565, No. 1-3, pp. 122-6.
Journal code: 0155157. ISSN: 0014-5793.
AU Nakajima Yoshihiro; Ikeda Masaaki; Kimura Takuma; Honma Sato; Ohmiya
Yoshihiro; Honma Ken-ichi
AN 2004237193 MEDLINE
- L37 ANSWER 8 OF 25 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on
STN
AN 2004124935 ESBIODBASE
TI Bidirectional role of orphan nuclear receptor RORα in clock gene
transcriptions demonstrated by a novel reporter assay system
AU Nakajima, Yoshihiro; Kimura, Takuma; Ohmiya, Yoshihiro; Ikeda, Masaaki;
Honma, Sato; Honma, Ken-Ichi
CS Nakajima, Yoshihiro; Kimura, Takuma; Ohmiya, Yoshihiro (Cell Dynamics
Research Group, Res. Institute for Cell Engineering, Natl. Inst. Adv.
Indust. Sci. T., Midorigaoka, Ikeda, Osaka 563-8577 (JP)); Ikeda,
Masaaki (Molecular Clock Project, Research Center for Genomic Medicine,
Saitama Medical School, Yamane, Hidaka, Saitama 350-1241 (JP)); Ikeda,
Masaaki (Department of Physiology, Saitama Medical School, Moroyama,
Saitama 350-0495 (JP)); Honma, Sato; Honma, Ken-Ichi (Department of
Physiology, Hokkaido University, Graduate School of Medicine, Sapporo
060-8638 (JP))
EMAIL: y-nakajima@aist.go.jp
SO FEBS Letters (7 May 2004) Volume 565, Number 1-3, pp. 122-126, 20 refs.
CODEN: FEBSLET ISSN: 0014-5793
DOI: 10.1016/j.febslet.2004.03.083
PUI S0014579304003941
CY Netherlands
DT Journal; Article
LA English
SL English
ED Entered STN: 2 Feb 2009
Last updated on STN: 2 Feb 2009
- L37 ANSWER 9 OF 25 MEDLINE on STN DUPLICATE 4
TI The influence of the region between residues 220 and 344 and beyond in
Phrixotrix railroad worm luciferases green and red bioluminescence.
SO Protein engineering, design & selection : PEDS, (2004 Feb) Vol. 17, No. 2,
pp. 113-7. Electronic Publication: 2004-01-12.
Journal code: 101186484. ISSN: 1741-0126.
AU Viviani Vadim R; Joaquim da Silva Neto Antonio; Ohmiya Yoshihiro
AN 2004155193 MEDLINE
- L37 ANSWER 10 OF 25 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on
STN
AN 2004101747 ESBIODBASE
TI The influence of the region between residues 220 and 344 and beyond in
Phrixotrix railroad worm luciferases green and red bioluminescence
AU Viviani, Vadim R.; Da Silva Neto, Antonio Joaquim; Ohmiya, Yoshihiro
CS Viviani, Vadim R. (Dept. of Molec. and Cellular Biology, Harvard

University, Cambridge, MA (US)); Viviani, Vadim R.; Da Silva Neto, Antonio Joaquim (Department of Biology, Instituto de Biociencias, Univ. Estadual de Sao Paulo (UNESP), Rua 24 A, Rio Claro, SP (BR), Rua 24 A, Bela Vista, Rio Claro, SP, 13506-900 (BR)); Ohmiya, Yoshihiro (Cell Dynamics Research Group, Division of Human Life Technology, Natl. Inst. Adv. Indust. Sci./Tech., Osaka (JP))

EMAIL: viviani@rc.unesp.br

SO Protein Engineering, Design and Selection (Feb 2004) Volume 17, Number 2, pp. 113-117, 28 refs.

CODEN: PEDSBR ISSN: 1741-0126

DOI: 10.1093/protein/gzh016

CY United Kingdom

DT Journal; Article

LA English

SL English

ED Entered STN: 2 Feb 2009

Last updated on STN: 2 Feb 2009

L37 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

TI An in vivo dual-reporter system of cyanobacteria using two railroad-worm luciferases with different color emissions

SO Plant and Cell Physiology (2004), 45(1), 109-113

CODEN: PCPHA5; ISSN: 0032-0781

AU Kitayama, Yohko; Kondo, Takao; Nakahira, Yoichi; Nishimura, Hideya;

Ohmiya, Yoshihiro; Oyama, Tokitaka

AN 2004:94218 HCAPLUS

DN 140:265122

L37 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Basic and application principle on the bioluminescence system of insect luciferases

SO Seikagaku (2004), 76(1), 5-15

CODEN: SEIKAQ; ISSN: 0037-1017

AU Ohmiya, Yoshihiro

AN 2004:146485 HCAPLUS

DN 140:214271

L37 ANSWER 13 OF 25 BIOTECHDS COPYRIGHT 2009 THOMSON REUTERS on STN

TI Novel modified polynucleotide of Phrixothrix hirtus red luciferase encoding polypeptide capable of mediating light-production, useful as reporter molecule in host cells and/or transgenic animals; recombinant enzyme protein production useful for gene expression monitoring

AU NAWOTKA K A; ZHANG W

AN 2003-12415 BIOTECHDS

PI WO 2003016839 27 Feb 2003

L37 ANSWER 14 OF 25 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on STN

TI Monitoring of circadian gene expression by rail-road worm luciferases dual-reporter system

SO PLANT AND CELL PHYSIOLOGY, (2003) Vol. 44, Supp. [S], pp. S36-S36. ISSN: 0032-0781.

AU Kitayama Y (Reprint); Oyama T; Nakahira Y; Viviani V; Ohmiya Y; Kondo T

AN 2003:726316 SCISEARCH

L37 ANSWER 15 OF 25 BIOTECHDS COPYRIGHT 2009 THOMSON REUTERS on STN

TI Nucleic acid molecules encoding luciferases used as diagnostic tools; vector-mediated Phrixothrix vivianii recombinant enzyme gene transfer and expression in host cell for disease diagnosis

AU VIVIANI V R; OHMIYA Y

AN 2003-01481 BIOTECHDS
PI US 2002119542 29 Aug 2002

L37 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI The structural determinants of bioluminescence colors in railroad worm and other pH-insensitive luciferases
SO Bioluminescence & Chemiluminescence: Progress & Current Applications, [Proceedings of the Symposium on Bioluminescence and Chemiluminescence], 12th, Cambridge, United Kingdom, Apr. 5-9, 2002 (2002), 19-22. Editor(s): Stanley, Philip E.; Kricka, Larry J. Publisher: World Scientific Publishing Co. Pte. Ltd., Singapore, Singapore.
CODEN: 69DPGZ; ISBN: 981-238-156-2
AU Viviani, V. R.; Uchida, A.; Viviani, W.; Ohmiya, Y.
AN 2003:108762 HCAPLUS
DN 139:318832

L37 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Luminescence assay system using luminescence reporter gene
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
IN Omiya, Katsuhiko; Ryufuku, Masayuki; Ono, Shoji; Takeuchi, Hideyuki
AN 2001:269080 HCAPLUS
DN 134:277609

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| PI | JP 2001103956 | A | 20010417 | JP 1999-288932 | 19991012 |
| | WO 2001027316 | A1 | 20010419 | WO 2000-JP7049 | 20001011 |
| | W: US | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |

L37 ANSWER 18 OF 25 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN
TI Luminescence test system for detecting luminescences with biological origins in single step individually or simultaneously by quantitative assay of reporter and signal having bioluminescence and similar emission
PI WO 2001027316 A1 20010419 (200129)* JA 17[0]
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: US
JP 2001103956 A 20010417 (200138) JA 6
IN OHMIYA Y; OMIYA K; ONO M; RYUFUKU M; TAKEUCHI H; TATSUFUKU M

L37 ANSWER 19 OF 25 MEDLINE on STN DUPLICATE 6
TI Thr226 is a key residue for bioluminescence spectra determination in beetle luciferases.
SO Biochemical and biophysical research communications, (2001 Feb 9) Vol. 280, No. 5, pp. 1286-91.
Journal code: 0372516. ISSN: 0006-291X.
AU Viviani V; Uchida A; Suenaga N; Ryufuku M; Ohmiya Y
AN 2001151807 MEDLINE

L37 ANSWER 20 OF 25 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN
AN 2001223303 ESBIOBASE
TI Thr226 is a key residue for bioluminescence spectra determination in beetle luciferases
AU Viviani, Vadim; Uchida, A.; Suenaga, N.; Ryufuku, M.; Ohmiya, Y.
CS Viviani, Vadim; Uchida, A.; Suenaga, N.; Ryufuku, M.; Ohmiya, Y. (Department of Biochemistry, Shizuoka University, Shizuoka-shi (JP)); Viviani, Vadim (Molecular and Cell Biology, Harvard University, Cambridge, MA 02138 (US)); Ohmiya, Y. (Department of Organic Materials, Osaka National Research Institute, Ikeda, Osaka (JP))
SO Biochemical and Biophysical Research Communications (2001) Volume 280,

Number 5, pp. 1286-1291, 35 refs.

CODEN: BBRCA9 ISSN: 0006-291X

DOI: 10.1006/bbrc.2001.4254

CY United States of America

DT Journal; Article

LA English

SL English

ED Entered STN: 1 Feb 2009

Last updated on STN: 1 Feb 2009

- L37 ANSWER 21 OF 25 MEDLINE on STN DUPLICATE 7
- TI Bioluminescence color determinants of Phrixothrix railroad-worm luciferases: chimeric luciferases, site-directed mutagenesis of Arg 215 and guanidine effect.
- SO Photochemistry and photobiology, (2000 Aug) Vol. 72, No. 2, pp. 267-71. Journal code: 0376425. ISSN: 0031-8655.
- AU Viviani V R; Ohmiya Y
- AN 2000440153 MEDLINE
- L37 ANSWER 22 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
- TI Comparative aspects of a luciferase molecule from the Japanese luminous beetle, Rhagophthalmus ohbai.
- SO Science Report of the Yokosuka City Museum, (March, 2000) No. 47, pp. 31-38. print. CODEN: SRYMAX. ISSN: 0513-2622.
- AU Ohmiya, Yoshihiro [Reprint author]; Sumiya, Mina [Reprint author]; Viviani, Vadim R. [Reprint author]; Ohba, Nobuyoshi
- AN 2000:532984 BIOSIS
- L37 ANSWER 23 OF 25 MEDLINE on STN DUPLICATE 8
- TI Cloning, sequence analysis, and expression of active Phrixothrix railroad-worms luciferases: relationship between bioluminescence spectra and primary structures.
- SO Biochemistry, (1999 Jun 29) Vol. 38, No. 26, pp. 8271-9. Journal code: 0370623. ISSN: 0006-2960.
- AU Viviani V R; Bechara E J; Ohmiya Y
- AN 1999315203 MEDLINE
- L37 ANSWER 24 OF 25 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN
- AN 1999154998 ESBIOBASE
- TI Cloning, sequence analysis, and expression of active Phrixothrix railroad-worms luciferases: Relationship between bioluminescence spectra and primary structures
- AU Viviani, Vadim R.; Ohmiya, Yoshihiro; Bechara, Etelvino J. H.
- CS Viviani, Vadim R.; Ohmiya, Yoshihiro (Department of Biochemistry, Faculty of Education, Shizuoka University, Shizuoka-shi (JP)); Viviani, Vadim R. (Cell and Molecular Biology, Harvard University, 16 Divinity Avenue, Cambridge, MA 02138-2020 (US)); Bechara, Etelvino J. H. (Departamento de Bioquímica, Instituto de Química, Universidade de São Carlos, São Carlos, São Paulo-SP (BR))
- EMAIL: viviani@fas.harvard.edu
- SO Biochemistry (29 Jun 1999) Volume 38, Number 26, pp. 8271-8279, 48 refs. CODEN: BICHAW ISSN: 0006-2960 DOI: 10.1021/bi9900830
- CY United States of America
- DT Journal; Article
- LA English
- SL English
- ED Entered STN: 31 Jan 2009
- Last updated on STN: 31 Jan 2009

L37 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Cloning and expression of a luciferase from the Japanese
luminous beetle *Rhagophthalmus ohbai*
SO Bioluminescence and Chemiluminescence: Perspectives for the 21st Century,
Proceedings of the International Symposium on Bioluminescence and
Chemiluminescence, 10th, Bologna, Sept. 4-8, 1998 (1999), Meeting Date
1998, 433-436. Editor(s): Roda, Aldo. Publisher: Wiley, Chichester, UK.
CODEN: 67YCAD
AU Sumiya, M.; Viviani, V. R.; Ohba, N.; Ohmiya, Y.
AN 1999:496942 HCAPLUS
DN 131:308217

=>

=> d ab 5,9,11,13,14,21

L37 ANSWER 5 OF 25 MEDLINE on STN DUPLICATE 2
AB Luciferases are widely used for the quantitative monitoring of gene
expression in a variety of organisms. We successfully expressed novel
red- and green-emitting luciferases of *Phrixothrix*
railroad worms in mammalian cells in combination with the Kozak sequence
and the CAG promoter. The characteristic properties of these luciferases
indicate that they are appropriate reporter genes for the simultaneous
monitoring of two gene expressions.

L37 ANSWER 9 OF 25 MEDLINE on STN DUPLICATE 4
AB To find the regions having a major influence on the bioluminescence
spectra of railroad worm luciferases, we constructed new chimeric
luciferases switching the fragments from residues 1-219 and from 220-545
between *Phrixothrix viviani* (PxvGR; lambda(max) = 548 nm) green
light-emitting luciferase and *Phrixothrix hirtus*
(PxrRE; lambda(max) = 623 nm) red light-emitting luciferases.
The emission spectrum (lambda(max) = 571 nm) and K(M) for luciferin in the
chimera PxRE220GR (1-219, PxrRE; 220-545, PxvGR) suggested that the region
above residue 220 of PxvGR had a major effect on the active site.
However, switching the sequence between the residues 220-344 from PxvGR
luciferase into PxrRE (PxREGRRRE) luciferase resulted in red light emission
(lambda(max) = 603 nm), indicating that the region 220-344 by itself does
not determine the emission spectrum. Furthermore, the sequence before
residue 220 of the green-emitting luciferase is incompatible for light
emission with the sequence above residue 220 of PxrRE. These results
suggest that the fragments before and after residue 220, which correspond
to distinct subdomains, may fold differently in the green- and
red-emitting luciferases, affecting the active site conformation.

L37 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
AB In vivo genetic reporter systems using luciferase enzymes enable the
real-time monitoring of gene expression in living cells. We have
challenged concurrent monitoring of two independent promoter activities
within the same cells to precisely compare their characteristics in vivo.
In this report, we describe a simple dual-reporter system capable of
simultaneously monitoring two promoter activities in living cyanobacterial
cells. Two railroad-worm luciferases catalyzing the bioluminescent
emissions of different colors served as the dual reporters; each emission
was successfully separated by interference filters to estimate the individual
bioluminescence signals using photomultiplier tubes. Using this system,
we clearly demonstrated the difference in the expression profiles between
promoters in the same cells.

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AB DERWENT ABSTRACT:

NOVELTY - An isolated polynucleotide (I), comprising a polynucleotide having at least 85% identity to a modified red luciferase sequence (S) of 1641 base pairs given in the specification, of *Phrixothrix hirtus* (railroad worm) where the polynucleotide encodes a polypeptide capable of mediating light-production, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) an expression cassette (II) comprising (I); (2) a cell comprising (II); and (3) a non-human transgenic animal, comprising (II).

WIDER DISCLOSURE - Disclosed are: (1) isolated polynucleotide (III) having at least 85% sequence identity to native red *P.hirtus* luciferase sequence or its fragment; (2) polypeptide sequences (IV) encoded by (I) or (III) as well as modified, optimized polypeptide sequences; (3) fragments of native red *P.hirtus* luciferase sequence; (4) expression cassette comprising the native red *P.hirtus* luciferase polynucleotide sequences; (5) host cell or transgenic animal comprising the above cassette; (6) polypeptide sequences which are immunologically identifiable with (IV); and (7) fragments of (III).

BIOTECHNOLOGY - Preferred Polynucleotide: (I) has at least 90-98% identity to (S).

USE - (I) is useful as a reporter molecule, in host cells and/or transgenic animals. (I) is useful for monitoring expression of a gene in a host cell. (II) is useful for producing transgenic, non-human animals.

EXAMPLE - Modification of a native railroad worm red luciferase-encoding sequence (GENBANK Accession Number AF139645) to a first optimized sequence (RRLUCX) was performed. The resulting optimized sequence did not produce light. The first optimized sequence RRLUCX was modified, based on the information obtained in the independent sequence of the native isolate in order to obtain a light-generating polypeptide. Plasmids expressing the modified luciferase polynucleotides were introduced into mammalian host cells to determine relative luciferase activities present in their prepared cell extracts. In vivo expression of the luciferase reporter gene by cells was determined, by evaluating light production, mediated by the luciferase polypeptide. The RRLUCXC polynucleotide sequence was seen to be completely functional when expressed in the host cells and produced a light of lambda(max) approximately 622 nm. (55 pages)

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AB Chimeric proteins were produced using the green light-emitting luciferase of *Phrixothrix vivianii* (PxGr: lambda max = 548 nm) and the red light-emitting luciferase of *Phrixothrix hirtus* (PxRe: lambda max = 623 nm). Constructs containing residues 1-344 of the red light-emitting luciferase with residues 345-545 of the green light emitting one emitted red light (PxReGr; lambda max = 613 nm), while the reverse emitted green light (PxGrRe; lambda max = 552 nm). From these results we conclude that the region 1-344 determines the color of bioluminescence (BL) in railroad-worm luciferases, and that residues above 344 are not involved. The substitution R215S in the green light-emitting luciferase (PxGr) resulted in a approximately 40 nm redshift on the BL spectrum (lambda max = 585 nm) and an associated decrease of activity, whereas the same mutation in PxRe luciferase had little effect. Guanidine was shown to cause blueshifts in the BL spectra and stimulate the activity of the red-emitting luciferases (from lambda max = 623 to lambda max = 600 nm) and in PxGr R215S (from lambda max = 585 to lambda max = 560 nm) mutant luciferase, but not in the green-emitting luciferases, suggesting that guanidine can simulate positively charged residues involved in BL color determination.

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

126.21

126.43

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-0.82

-0.82

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